



## Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at <http://about.jstor.org/participate-jstor/individuals/early-journal-content>.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact [support@jstor.org](mailto:support@jstor.org).

## JAMES MASON CRAFTS (1839-1917)

Fellow in Class I, Section 3, 1867.

The passing of another from among the few survivors of the older generation of leading chemists arouses sorrow for our great loss and gratitude for his devoted labor. Among the honored names of American scientific men of the 19th century that of Professor Crafts will always be remembered. Both in the direction of organic chemistry and in that of physical chemistry he rendered contributions of great permanent value.

James Mason Crafts was born at Boston on March 8, 1839. He was the son of Royal Altamont Crafts and Marianne (Mason) Crafts. He is remembered by his schoolmates at the Sullivan School in Boston as a serious boy, but one glowing with vigor and at times full of fun and jollity. The most vivid impression was of his mechanical ingenuity and dexterity: he was able at the age of nine or ten to pull to pieces and successfully reassemble his watch — a rare possession in those days among school children. All his childhood was spent in Boston, where he completed at the Boston Latin School and under the private tuition of Dr. Samuel Eliot the excellent training in mathematics with which he entered the then recently founded Lawrence Scientific School of Harvard University in 1856. At Harvard he pursued the study of chemistry under Professor Horsford, and graduated with the degree of S. B. in 1858.

The winter of 1858-59 he spent as a graduate student of engineering at Cambridge, whence he went to the Bergakademie at Freiberg in Saxony to continue once more the study of the science to which he was to devote his lifework. In 1860 he migrated to the University of Heidelberg, where he studied under Robert W. Bunsen, at that time and for many years afterwards director of the chemical laboratory there. In the following year the young chemist left Germany for Paris, where he came under the influence of Wurtz, and for four years continued his studies at the École de Médecine. Ever afterwards his interest centered in France rather than in Germany.

Returning to America in 1865 he became mine examiner in Mexico during 1866-1867 — a task which involved courage and resourcefulness as well as expert knowledge, since the country was alive with bandits and filled with difficulties. His adventures were thrilling,

but he told of them very modestly. In the following autumn (1867) he became professor of chemistry and dean of the chemical faculty at Cornell University, a position which he retained for three years. From Ithaca he was called to the professorship at the Massachusetts Institute of Technology as successor to Professor F. H. Storer. He devoted himself to the work, and his health suffered. The call of France was insistent, and changing in 1874 his title to that of non-resident professor at the Massachusetts Institute, he turned again to Paris, where, in collaboration with Professor Charles Friedel, he discovered the important organic reaction which will always bear his name. After 1880, when he resigned even the non-resident professorship at the Massachusetts Institute, he spent most of the succeeding decade in France, and it was not until 1891 that he returned to America as a permanent abiding place. Then he once more became connected with the Institute in Boston, conducting research there, and for five years (1892-97) filling the chairmanship of the chemical department and the professorship of organic chemistry. His work as a teacher was inspiring and effective. From October, 1897 to 1900 he was first acting president and then president of this great technical school. After his resignation of the presidency, which offered a sort of work never entirely to his taste, he returned to the labors which really claimed his interest, namely, research in the direction of organic and physical chemistry, still doing part of his work in the old Walker building of the Institute near Copley Square. He worked for the love of science, not for fame or money, and his ample means never led him away from high aims and solid attainments.

His noteworthy contributions to the sum of human knowledge gained for him recognition on all sides. In 1885 he received the Jecker prize of the Paris Academy of Sciences, and was made Chevalier of the Legion of Honor of France. In 1898 he was awarded the honorary degree of LL.D. by Harvard University, and in 1911 the Rumford Medal by this Academy "for his researches in high temperature thermometry and the exact determination of fixed points on the thermometric scale." He was first elected a fellow of the Academy in 1867 and was reelected to resident membership in 1891 after an interval of non-membership due to his prolonged absence in France. As long ago as 1872 he became a member of the National Academy of Sciences, and was later corresponding member of the British Association for the Advancement of Science, foreign member of the Royal Institution of Great Britain (1904) as well as fellow of many other learned academies and chemical societies. He was a member also of the Saturday Club of Boston, famous in the annals of American literature.

On June 13, 1868, he married Miss Clemence Haggerty of New York, who died in 1912. He is survived by four daughters: Mrs. Russell S. Codman, Mrs. Gordon K. Bell, Miss Elizabeth Crafts and Miss Clemence Crafts.

Although much of a traveler during the early part of his life, toward the end he divided his time between his Boston residence on Commonwealth Avenue and his beautiful country place at Ridgefield, Connecticut, where he had a small laboratory well fitted for his work, and where he enjoyed quiet and seclusion, always more to his taste than publicity or the whirl of city life. He retained his vigorous mental powers to the end, although somewhat restricted in physical activity by illness during his last few years. His well-rounded and useful life of over seventy-eight years came to an end at Ridgefield on June 20, 1917, when he succumbed to a sudden, painful illness of the heart.

As already stated, his scientific work divides itself naturally into two groups of researches, namely, those in organic and those in physical chemistry. His earliest published contributions to knowledge concerned the organic compounds of silicon, upon which he published an interesting and important paper in 1865. This was followed by work upon the arsenic and arsenious esters, which appeared in 1871. Six years afterwards, with Professor Charles Friedel, he published in volume 84 of the *Comptes Rendus* the first notice of the method of organic synthesis by means of the chloride of aluminum, which has had such a remarkable effect upon the growth of organic chemistry. In the succeeding years paper after paper from these two eminent collaborators appeared, amplifying their great discovery. In 1880 Professor Crafts's work upon accurate thermometry showing the peculiar hysteresis effects in glass, which must be considered in any accurate determination of temperature by the mercury thermometer, began to appear. At about this time also he published valuable papers in collaboration with Professor Friedel and others concerning vapor densities of the halogens at high temperatures.

His work on thermometry led to the determination of new fixed points to which the thermometric scale might be referred; and his study of the boiling points of naphthalene and of mercury attained a degree of accuracy little short of amazing, considering the state of these matters before they had come under the scrutiny of his insight and patient experimentation. Later in Boston, from 1900 almost to the time of his death, he devoted himself to chemical research, especially to the study of organic catalytic reactions in concentrated solutions, feeling that such reactions had not received the attention which

was their due. At the same time he spent much time and thought on the construction of an exceedingly accurate barometer, by means of which he could measure atmospheric pressure with great precision and thus obtain yet more accurate values for the boiling points of various substances which should serve as standards.

In viewing collectively the outcome of Professor Crafts's varied work, one may note that much of it, both physical and organic, had as its object the providing of means and methods for further advance, of use to others in many fields. Those whose labor is lightened, broadened, and simplified by the important contributions of his scientific imagination and of his persistent, effective research in the laboratory are deeply grateful for the indispensable aid which he rendered, and will be, far into the future. His intimates mourn a generous, loyal, high-minded friend, whose vigorous intellect always turned toward worthy ends.

THEODORE W. RICHARDS.

#### EDMONDO DE AMICIS (1846-1908)

Foreign Honorary Member in Class III, Section 4, 1901.

Edmondo De Amicis was born at Oneglia, a little town on the sea-coast southeast of Genoa, October 21, 1846. Having attended school at Cuneo and Turin, he went to the Military Academy at Modena, from which in 1865, he was appointed Second Lieutenant of the Third Regiment of the Line. The following year he took part in the Battle of Custoza. In 1867 he became managing editor of *Italia Militare*, an important military journal published at Florence. To this he contributed many sketches of the life actually lived by Italian soldiers and officers, and when these were reprinted in a volume with the title "La Vita Militare" in 1868, they gave him an immediate popularity which went on widening until his death. They had also real influence in improving the conditions of the soldiers, by moderating the harshness of their discipline, a harshness then common in European armies. De Amicis continued to edit the Journal for some time and he remained in the Italian army until 1871. He was present when Cadorna's troops entered by the Porta Pia and freed Rome from Papal rule September 20, 1870. After resigning from the service he devoted himself to literature, making Turin his headquarters and he was, with